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# NUTRITION PROGRAM NEWS

U. S. DEPARTMENT OF AGRICULTURE, WASHINGTON, D. C.

MAY-JUNE 1968

## Changes in Diets of Households, 1955 to 1965—Implications for Nutrition Education Today

SADYE F. ADELSON, *Chief, Food Consumption Branch, Consumer and Food Economics Research Division*

The nationwide survey of household food consumption in the spring of 1965<sup>1</sup> showed that 50 percent of the households in the United States had diets that were rated "good." These diets met the Recommended Dietary Allowances set by the Food and Nutrition Board of the National Academy of Sciences-National Research Council (NAS-NRC) for protein, two minerals (calcium and iron), and four vitamins (vitamin A value, thiamine, riboflavin, and ascorbic acid).

About 20 percent of the households had diets that were rated "poor." Diets were rated poor if they provided less than two-thirds of the allowance for one or more of the nutrients studied. Two-thirds of the allowance for any nutrient is considered a level below which diets could be nutritionally inadequate for some individuals over an extended period of time. The survey provided no indicator of nutritional status.

About 30 percent of the households had diets that ranged between good and poor. Such diets are sometimes labeled "fair" for want of a more descriptive term.

Nearly 40 percent of the households with incomes under \$3,000 had poor diets. Some—but proportionately fewer—poor diets were found at higher income levels, even the highest.

More diets were rated poor in 1965 than in 1955, when the previous nationwide survey was made. Decreased use of milk and milk products, vegetables, and fruit—the main sources of calcium, ascorbic acid, and vitamin A value—was chiefly responsible for the changes in dietary levels.

### THE SURVEYS

The two most recent nationwide surveys of household food consumption were made in 1965 and 1955. These were the fourth and fifth such nationwide surveys made by the U. S. Department of Agriculture. Earlier ones were made in 1948, 1942, and 1936. The 1965 survey was the first one to cover all four seasons for a continuous

### SADYE F. ADELSON RETIRES

After 31 years of service to the programs of the Agricultural Research Service, Sadye F. Adelson, Chief of the Food Consumption Branch, Consumer and Food Economics Research Division, retired on March 30, 1968. The major share of her time was devoted to surveys of food consumption and dietary levels; the most recent was the 1965-66 nationwide food consumption survey of households and individuals.

For several years, in addition to other assignments, Miss Adelson was responsible for the articles in this publication—then entitled **NUTRITION COMMITTEE NEWS**. Under her guidance, this periodical developed into a tool for nutrition education that you, our readers, tell us is most useful in community nutrition programs. This issue of **NUTRITION PROGRAM NEWS** was her last writing assignment in her official capacity.

Her colleagues are pleased that she plans to live in Washington, D. C.

Dr. Daniel Swope, formerly with the National Canners Association, succeeds Miss Adelson.

12-month period. The 1955 survey, like most of the earlier ones, was conducted during April, May, and June.

This article will be devoted to changes in food consumption from the spring of 1955 to the spring of 1965. Later there will be publications with separate data for each season of the survey year, April 1, 1965, to March 31, 1966.

The surveys were made by the recall method, concentrated on food used at home, and were designed to provide

information from a sample representative of housekeeping households in the United States. A household was considered "housekeeping" if at least one person ate 10 or more meals from home food supplies during the 7 days preceding the visit of an interviewer. This was the reference period for which each homemaker reported the home food consumption of her household.

Information was obtained on the kinds and amounts of foods used at home, their source, and, if bought, their cost. Food from all sources was included—purchased food, food from the home garden or farm, food received as gifts or instead of pay, and federally donated food. The age and sex of the persons who ate from home food supplies, the number of meals eaten by each one, the income of the family, and other data related to the evaluation of household food consumption were also collected.

Experienced interviewers were given intensive training for the collection of the specific data.

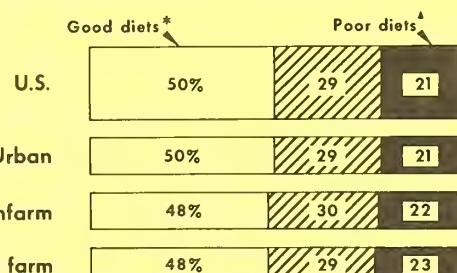
This article discusses the dietary levels of households in the United States in the spring of 1965 and some of the changes that have occurred since the spring of 1955. It makes some suggestions for strengthening nutrition education programs. More on the survey will be found in the publications listed on page 8. Publications to be issued later will give further detail.

## THE DIETARY SITUATION, SPRING 1965

The food consumption of 50 percent of the households surveyed in 1965 provided diets that met the allowances for all seven nutrients. These diets were rated good. About 20 percent had diets that were below two-thirds of allowances in one or more nutrients. These diets were rated poor. About 30 percent of the households had diets that ranged between good and poor. Such diets are sometimes labeled "fair."

The dietary situation was similar among urban, rural nonfarm, and rural farm households.

### URBANIZATION AND QUALITY OF DIETS



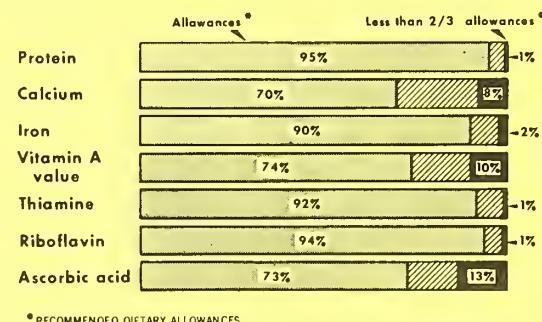
\* MET RECOMMENDED DIETARY ALLOWANCES FOR 7 NUTRIENTS  
\* HAD LESS THAN 2/3 ALLOWANCE FOR 1 TO 7 NUTRIENTS  
NATIONWIDE HOUSEHOLD FOOD CONSUMPTION SURVEY, SPRING 1965

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From 90 to 95 percent of the households met the allowances for protein, iron, thiamine, and riboflavin. Only 70 to 75 percent had diets that met the allowances for calcium, vitamin A value, and ascorbic acid. Of the households surveyed, 8 percent did not meet two-thirds of the allowances for calcium, 10 percent did not meet two-thirds of the allowances for vitamin A value, and 13 percent did not meet two-thirds of the allowances for ascorbic acid.

### DIETS PROVIDING ALLOWANCES AND LESS THAN 2/3 ALLOWANCES



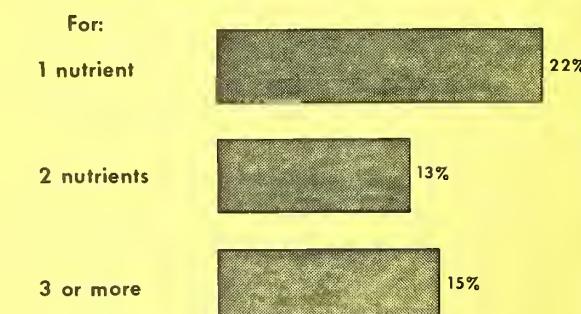
\* RECOMMENDED DIETARY ALLOWANCES  
NATIONWIDE HOUSEHOLD FOOD CONSUMPTION SURVEY, SPRING 1965

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More households had diets that were below the allowances for two or more nutrients (28 percent) than for only one nutrient (22 percent).

### DIETS BELOW ALLOWANCES



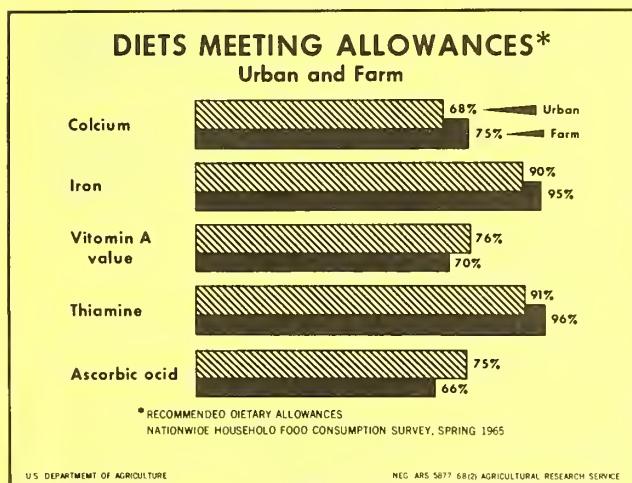
RECOMMENDED DIETARY ALLOWANCES  
NATIONWIDE HOUSEHOLD FOOD CONSUMPTION SURVEY, SPRING 1965

U.S. DEPARTMENT OF AGRICULTURE

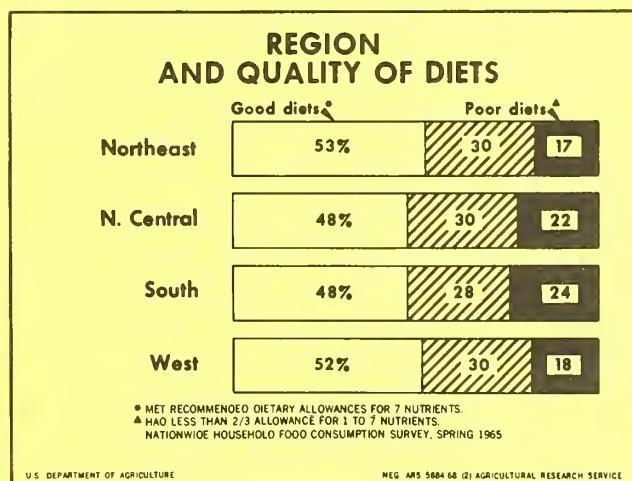
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Urban families more frequently than farm families had diets meeting allowances for vitamin A value and ascorbic acid, reflecting their greater use of dark-green and deep-yellow vegetables and citrus fruit. On the other hand,

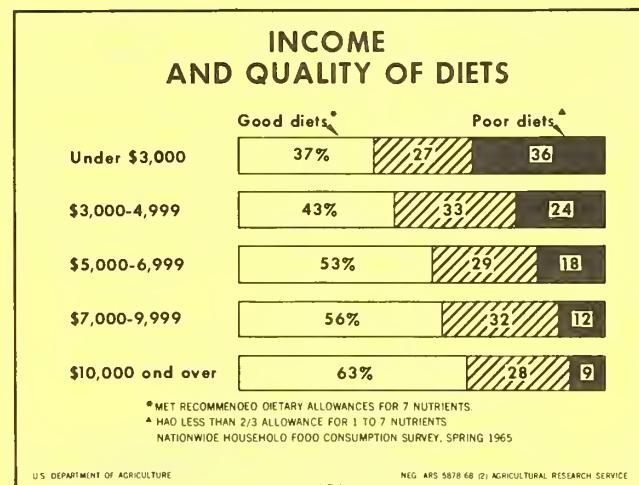
farm families more frequently had diets meeting allowances for calcium, iron, and thiamine, reflecting their greater use of milk, milk products, and grain products.



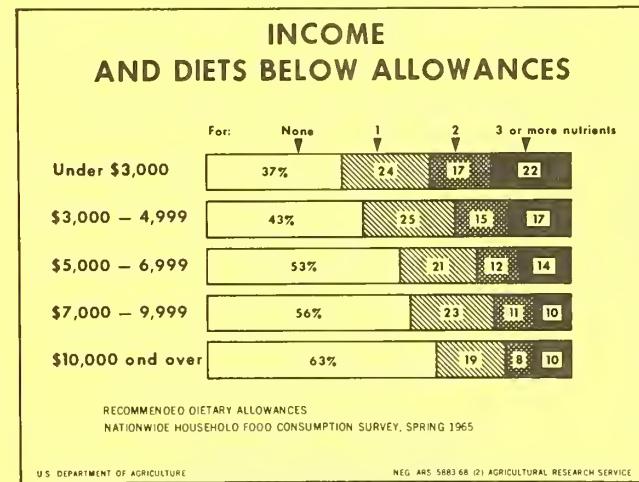
Poor diets were somewhat more frequent in the North Central region and in the South.



The percentage of households with good diets increased markedly with income. Some households in every income group in 1965 had poor diets, but the greatest percentages of poor diets occurred at the lowest income levels. Poor diets were four times as frequent among households with incomes under \$3,000 as among households with incomes of \$10,000 and over. The difference is more marked than percentages indicate, because the low-income group included more households than the high-income group. The under-\$3,000 income group included 22 percent of the surveyed population; the \$10,000-and-over income group included 12 percent.



The percentages of diets with one nutrient below allowances were fairly similar. They ranged from 19 to 25 percent of all income groups surveyed. However, the percentages with 2 and 3 or more nutrients below allowances were larger for households with low incomes than for those with high incomes.



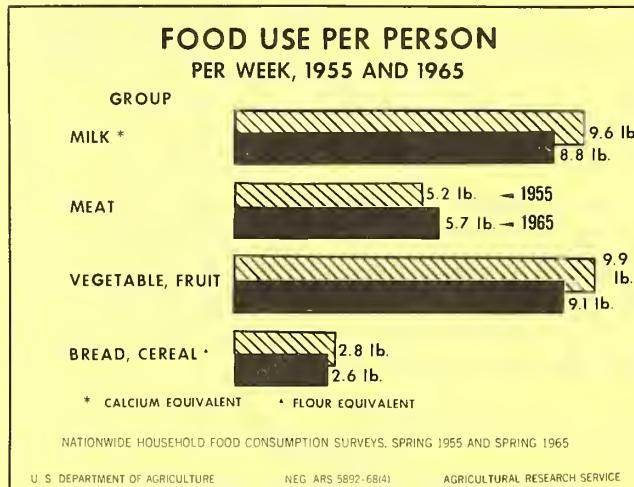
## COMPARISON: 1965 AND 1955

The meat group is the only major food group that increased in use in 1965 over 1955. Consumption of this group rose from 5.2 pounds to 5.7 pounds per person per week. (A unit of 21 meals from home food supplies during the week reported was considered equivalent to the consumption of 1 person.) Use of other major food groups decreased: the milk group, from 9.6 to 8.8 pounds or 4.5 to 4.1 quarts (calcium equivalent); the vegetable and fruit group, from 9.9 to 9.1 pounds; and the bread-cereal group, from 2.8 to 2.6 pounds (flour equivalent).

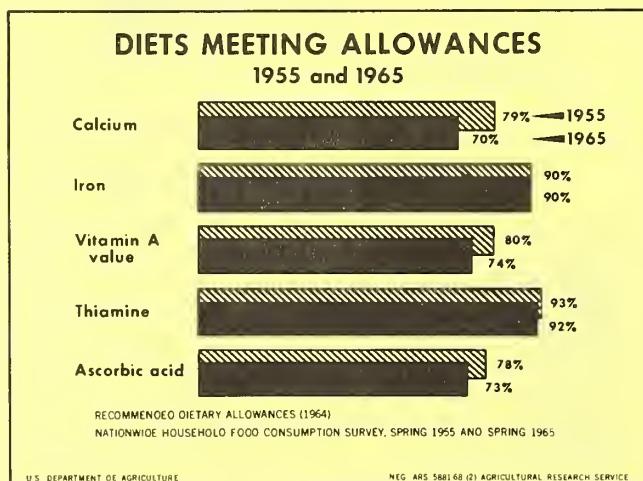
The meat group includes meat, poultry, fish, eggs, dry beans, dry peas, and nuts. The milk group includes milk, cream, cheese, ice cream, and other frozen milk desserts.

The vegetable-fruit group includes all vegetables and fruits. The bread-cereal group includes flour, flour mixes, cereal, meal, pastes, and bakery products—whole grain, enriched, and unenriched.

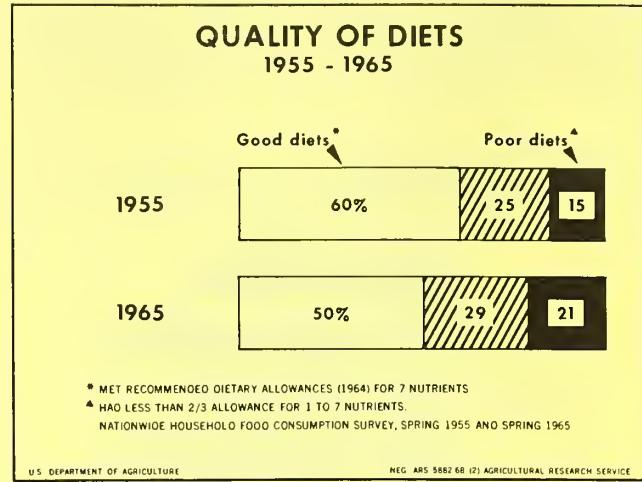
Use of fats and oils and sugar and sweets (not shown) stayed about the same from 1955 to 1965. Fats and oils decreased slightly from about 14 to 13 ounces per person per week. Sugar and sweets came to about 22 ounces in both periods.



Shifts in food consumption affected the nutritional quality of household diets. Somewhat fewer diets met the allowances for calcium, vitamin A value, and ascorbic acid in 1965 than in 1955. Both surveys have revealed that fewer diets met recommended allowances for these nutrients than for protein, iron, thiamine, and riboflavin—the other nutrients studied.



Diets of only five out of 10 households surveyed in 1965 rated good, compared with six out of 10 surveyed in 1955. About 20 percent of the diets in 1965 and about 15 percent in 1955 rated poor.



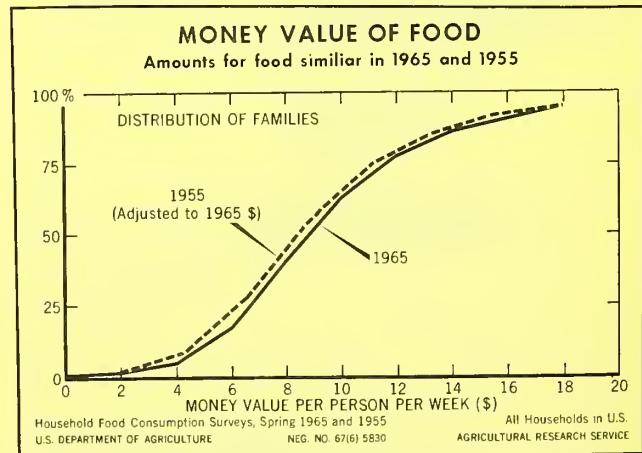
The downward trend over the 10 years in the nutritional quality of the diets of the Nation's families as a whole, of course, reflected changes in dietary levels in the four regions. Somewhat more diets were rated poor in the later period among families in the Northeast, North Central, South, and West.

## CONTRIBUTING FACTORS

Survey questions did not probe into why families consumed the foods they did during the week surveyed. However, some of the reasons seem evident; others can be surmised. Completely objective determination is difficult due to competing and supplementing forces.

### Money value of food

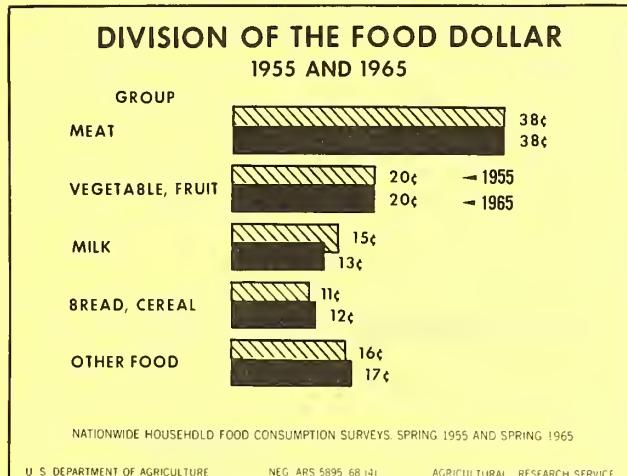
The money value of the food consumed at home per person was similar in 1965 and 1955, after adjustment was made for the rise in the cost of food over the 10-year period. The average money value of home food was about \$8.80 per person per week in 1965.



The division of the food dollar in 1955 and 1965 was similar. The food dollar refers to a dollar's worth of food,

including food that was purchased, home-produced, or received free.

In both periods, on the average, the meat group took 38 cents of the food dollar and the vegetable-fruit group, 20 cents. There were some small shifts, however. The milk group dropped from 15 cents in 1955 to 13 cents in 1965. There was a gain of 1 cent in the bread-cereal group, which rose from 11 to 12 cents. The "other foods" group went from 16 to 17 cents. The other foods group includes regular and low-calorie soft drinks, which took about 1 cent of the food dollar in 1955 and about 2 cents in 1965.



## Price

Shifts in amounts of food purchased are usually inversely correlated with changes in food prices. However, in the spring of 1965 price relationships were made unclear by the affluent economic situation of many families.

Increased consumption of poultry probably was related to a substantial price decrease for a popular food. However, beef consumption rose despite a price increase; this indicated the force of food likes in an affluent society. The effect of price on food consumption in the spring of 1965 needs more searching analysis.

## Convenience

Research by the U. S. Department of Agriculture and the food industry in developing convenience foods greatly added to the kinds of food on the market in 1965. Increasing use of many of these convenience foods indicates their consumer acceptance. Expenditures for 32 selected convenience foods averaged \$1.84 per person per week in 1955, and \$2.47 in 1965. These expenditures were a large share of total expenditures for purchased food, 27 percent in 1955 and 30 percent in 1965.

The increased use of convenience food may be due in part to the increase in number of employed homemakers. In 1965, bakery products replaced a large share of the

flour used 10 years earlier for home baking. Frozen and canned vegetables were used more than fresh ones. Frozen and chilled citrus fruit juices, fruit ade, and punch gained in use while whole citrus fruit decreased.

Some convenience foods decreased in use and were replaced by foods with greater convenience, lower price, or better flavor. There were shifts from evaporated and condensed milks to nonfat dry milk; from flour mix to canned biscuits, chilled dough, brown 'n' serve rolls, and fully baked products; and from dried vegetables and fruit to canned or frozen ones.

Convenience features undoubtedly also contributed to the increased use of cold breakfast cereals, lunch meat, frozen milk desserts, soups, gravies and other foods.

Use of commercially canned, frozen, and dried soups increased about 30 percent, from 0.7 pound in 1955 to 0.9 pound per household per week in 1965. In terms of 6-fluid-ounce servings, the increase was from 3.6 to 4.9 per household per week.

## Snacking

More youths in the population and more snacking by people in general probably contributed to the increased home use of peanut butter, cheese, frozen milk desserts, fruit juices, cookies, and similar foods.

Beverages account for much of the increase in snacking. At home and at work there are "coffee breaks"—although the beverage is not necessarily coffee. Home consumption of beverages rose about 15 percent from 1955 to 1965. The trend has been away from milk as a beverage at home and toward more coffee, soft drinks, fruit ade, and punch.

An estimated number of 8-ounce cups of beverage consumed per household per week follows:

	1955	1965
Milk: Total	46 cups	39 cups
Whole milk	40	32
Other milk <sup>1</sup>	6	7
Juice: Total	6	7
Fruit	5	6
Citrus	3	4
Vegetable	1	1
Other:		
Coffee	38	48
Tea	20	21
Soft drinks	5	9
Fruit ade, punch	1	13

<sup>1</sup> Includes buttermilk, skim milk, chocolate milk, baby and diet formula.

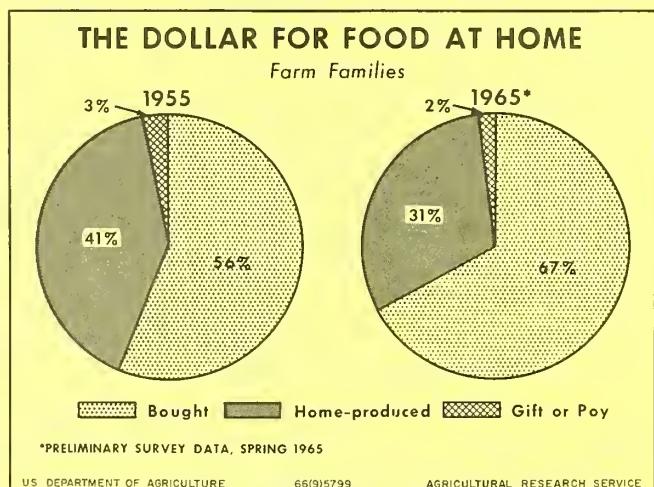
(These figures are based on the assumption that the foods listed were consumed entirely as beverages.)

Some of the decreased home use of milk may result from increased school use of milk. The Type A School Lunch Program, which requires a half-pint of milk with each lunch, reached over half again as many children in 1965 as in 1955. The School Milk Program reached 6.4 times as many children in 1965 as it had 10 years earlier when it was being started. Through the combined programs, school children received more than two and one-half times as much milk in 1965—5,859 million half-pints of milk—as in 1955—2,256 million half-pints.

### Home-produced food

The practices of farm families were more like non-farm families in 1965 than 10 years earlier. They spent more on purchased food for home use and on meals and snacks eaten out in 1965 than in 1955. Farm families increased their use of purchased bakery products and decreased their use of ingredients for home baking to a greater degree than nonfarm families.

The proportion of the food used at home by farm families that was home produced declined greatly from 1955 to 1965.



The percentage of the money value of vegetables and fruit that farm families produced at home remained about the same—or nearly 40 percent—from 1955 to 1965. For many farm families, it probably is more feasible to tend home gardens than to raise farm animals for home use.

Farm families in the spring of 1965 used a little more than 1/2 pound of fresh or home-processed dark-green vegetables per household per week, about the same amount of deep-yellow vegetables, and more than 1 pound of tomatoes. Most of the dark-green vegetables, about a fifth of the deep-yellow vegetables, and about half of the tomatoes were home produced. If farm families had raised more vegetables and fruits, chances are they would have used more. This would have improved their diets in

vitamin A value and ascorbic acid, two of the limiting nutrients in family diets. In 1965, proportionately more rural than urban diets were below two-thirds of the allowances for these vitamins.

### Affluence and mobility

Greater affluence coupled with greater mobility of the population in 1965 appear to have contributed to a blending of the food habits and practices of the various population groups in the country. For example, food selections of families in the North in the spring of 1965 had moved closer to those in the South through increased use of corn-meal and soft drinks. Food selections of families in the South had moved closer to those in the North through greatly increased use of bakery products and beef and greatly decreased use of flour, meals and cereals, and pork in 1965. Families in the North also increased their use of bakery products and beef and decreased their use of pork, but the percentage changes over the decade were smaller than those in the South.

### CONTRIBUTION OF FOODS TO NUTRIENTS

The shifts in home food consumption between 1955 and 1965 meant some shifts in the food sources of nutrients. However, essentially the same groups of food remained the major contributors to the nutrients.

Table 1 gives both the division of the food dollar and the percentage contribution of the food groups to the calories and nutrients in the spring of 1965. Nearly all food groups made a contribution to at least two nutrients that equaled or exceeded the proportion of the food dollar they represented as well as contributions to other nutrients.

The milk group—which took 13 percent of the food dollar—furnished 60 percent of the calcium, nearly 40 percent of the riboflavin, and 20 percent of the protein.

The meat group—which took the largest share (almost 40 percent) of the food dollar—furnished over 50 percent of the protein and over 40 percent of the fat and iron.

The vegetable-fruit group—which took 20 percent of the food dollar—furnished nearly 90 percent of the ascorbic acid and 50 percent of the vitamin A value.

Grain products (whole grain, enriched, and unenriched)—which took 12 percent of the food dollar—furnished 40 percent of the thiamine and 31 percent of the iron.

Fats and oils—which took 4 percent of the food dollar—furnished nearly 30 percent of the nutrient fat and about 10 percent of the vitamin A value.

Sugar and sweets (including soft drinks)—which took 6 percent of the food dollar—furnished 10 percent of the calories, but only 5 percent or less of individual nutrients.

The foods that contribute most to the nutrients in which both 1955 and 1965 diets met allowances least frequently—calcium, vitamin A value, and ascorbic acid—contributed less in 1965 than in 1955 due to decreases in their use.

To improve diets low in calcium, the accent needs to be on increased use of the milk group. To improve diets low in vitamin A value, vegetables, especially dark-green and deep-yellow ones, are needed. To improve diets low in ascorbic acid, vitamin C-rich fruit and vegetables are needed. Increasing use of these foods would also improve diets that are below allowances for other nutrients because these foods are also substantial contributors of some other nutrients.

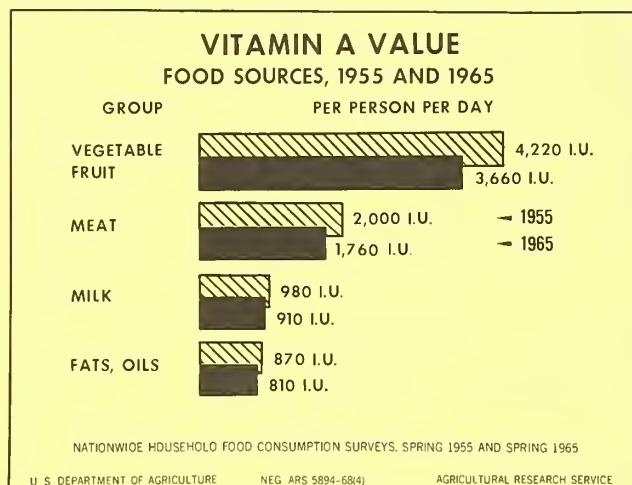
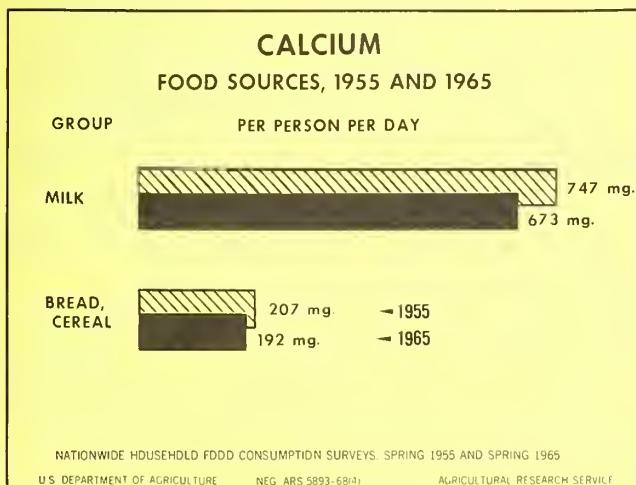
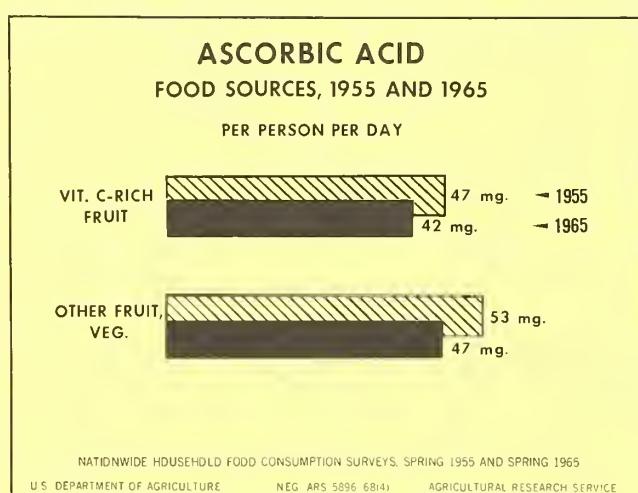


Table 1.—Percentage division of money value of food and contribution of home foods to nutritive value of diets

Food group	Money value Pct.	Food energy Pct.	Protein Pct.	Fat Pct.	Calcium Pct.	Iron Pct.	Vitamin A value <sup>1</sup> Pct.	Thiamine <sup>1</sup> Pct.	Riboflavin <sup>1</sup> Pct.	Ascorbic acid <sup>1</sup> Pct.
All food <sup>2</sup> .....	100	100	100	100	100	100	100	100	100	100
Milk, cream, ice cream, cheese .....	13	13	20	14	60	1	12	10	38	5
Meat, poultry, fish, eggs, dry beans and peas, nuts .....	38	28	52	44	7	41	24	29	30	1
Vegetables, fruit: All .....	20	10	7	2	9	18	50	19	9	88
Vegetables .....	12	6	6	2	6	13	42	12	7	41
Dark green, deep yellow .....	1	*	*	*	2	2	27	1	1	7
Fruit .....	7	4	1	*	3	5	7	6	3	47
Vitamin C-rich .....	3	1	1	*	2	2	4	4	1	41
Grain products: All .....	12	26	20	9	17	31	1	40	19	1
Enriched or whole grain .....	7	17	15	3	13	27	*	37	16	*
Fats, oils .....	4	12	*	29	1	*	11	*	*	*
Sugar, sweets: All .....	6	10	1	1	2	3	1	1	1	5
Soft drinks, punches <sup>3</sup> .....	3	2	*	*	*	*	1	*	*	5
Whisky, beer, wine .....	4	1	*	0	*	*	0	*	*	0
Other <sup>4</sup> .....	4	1	*	*	3	5	*	1	2	0

\* 0.5 or less.

<sup>1</sup> Cooking losses deducted.

<sup>2</sup> Percents may not add to 100 because of rounding.

<sup>3</sup> Includes punches, ades, and beverage powders; excluded low-calorie drinks.

<sup>4</sup> Includes yeast, baking powder, plain chocolate, cocoa, and coffee. Low-calorie drinks, seasonings, and similar items are included only in money value.

## IMPLICATIONS OF THE SURVEY FOR NUTRITION EDUCATION

The 1965 nationwide survey underscores the need for nutritionists to—

1. Intensify nutrition education programs. Many American families at all income levels need guidance in meeting their nutritional needs from the great abundance of foods available. Individuals need nutrition education to help them choose wisely in restaurants, snack bars, and school lunchrooms. Use mass media and other means to reach everyone. Since the same dietary shortages were shown in 1965 as 10 years earlier, new imaginative approaches are needed.
2. Emphasize increased consumption of milk and milk products, fruits, and vegetables.
3. Help low-income families make best use of the less expensive foods. Help them make use of such programs as the Federal food donation or food stamp program, the school lunch, school breakfast, and Head Start feeding programs.
4. Develop nutrition programs adapted to the needs of different age groups: young families, children, teenagers, and older folks.
5. Guide teenagers, and others, in the selection of snack foods that contribute nutrients to the day's diet.
6. Assist homemakers in their selection and use of convenience foods.

## MATERIALS

Listing of these materials is for the information of readers and does not necessarily mean recommendation. Materials or information may be obtained from the addresses given.

### Food consumption

**Nutritional Review**, reprinted from "National Food Situation" November 1966 and "A Table of Food Consumption Per Capita for 1947-49, 1957-59, 1963, 1964, and 1965." 8 pages, CFE (Adm.), 229-1, December 1966. USDA. Available from Consumer and Food Economics Research Division, Agricultural Research Service, USDA, Hyattsville, Maryland 20782. Single copies free.

**Nutritional Review**, reprinted from "National Food Situation" November 1967 and "A Table of Food Consumption Per Capita for 1947-49, 1957-59, 1963, 1964, 1965, and 1966." 8 pages, CFE (Adm.), 299-2, December 1967. USDA. Available from address above.

### Food purchasing and preparation

#### Family Fare—Food Management and Recipes.

Revised April 1968. 80 pages. Home and Garden Bulletin 1, USDA. Single copies free from Office of Information, U. S. Department of Agriculture, Washington, D. C. 20402. Also available from Superintendent of Documents, U. S. Government Printing Office, Washington, D. C. 20402; price 30 cents.

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Reports and visuals are now available from the 1965-66 Nationwide Survey of Household Food Consumption. These include:

#### Preliminary reports:

CFE-300, "Money Value of Food Used by Households in the United States, Spring 1965."

ARS 62-16, "Food Consumption of Households in the United States, Spring 1965."

ARS 62-17, "Dietary Levels of Households in the United States, Spring 1965."

Single copies are available upon request from:

Consumer and Food Economics Research Division  
ARS, USDA  
Federal Center Building  
Hyattsville, Maryland 20782

#### Final reports:

Report No. 1. "Food Consumption of Households in the United States, Spring 1965." For sale, Superintendent of Documents, Government Printing Office, Washington, D. C. 20402. \$1.25.

#### Slides and glossy prints of charts in this issue:

Available from:

Photography Division, Office of Information  
U. S. Department of Agriculture  
Washington, D. C. 20250

Color slides:

35-mm. slides ..... \$0.30 each

Glossy prints:

5" by 7" ..... \$0.90 each

8" by 10" ..... \$1.15 each

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